

1895.

## MAY.

The first meeting of the 1895 session of the Royal Society of Tasmania [was held in the Art Gallery, Museum, on Tuesday, May 20th. There was a very large attendance, Sir James Agnew occupying the chair in the absence of His Excellency the Governor, who had a prior engagement.

## PAPERS.

The following papers were taken as read:—

"NOTES ON A MINERAL SUBSTANCE NEW TO TASMANIA," by Mr. W. F. Petterd:—During a recent visit to the Zeehan silver-field my attention was drawn to a peculiarly coloured and unusual form of pyrites occurring in one of the silver-lead lodes on the property of the Silver Queen Prospecting Association. It is found in some quantity, both massive and disseminated, closely associated with various other forms of pyrites and richly argentiferous galena in a portion of this particular lode, locally known as "Clarke's Tribute." In colour it is of an unusual greenish grey with a bronze-like highly metallic lustre, but is sometimes inclined to brass yellow from extreme admixture of chalcopyrite. It is very brittle, with an uneven fracture. Its hardness is about 4, of the scale; specific gravity, 4.5. Upon a qualitative analysis by the wet process, and examination with the blowpipe, the substance proves to be a rare mineral known as stannite (a sulpho-stannate of iron and copper), or chemically,  $2 \text{ Fe, Sn S}_2 + 2 \text{ Cu S, Sn S}_2 = \text{S} 29.77; \text{ Cu } 29.77, \text{ Sn } 27.44, \text{ Fe } 13.02 = 100$ . The mineral is commonly known as "tin prites," or "bell-metal ore," and is almost peculiar to the stanniferous districts of Cornwall, England, being only rarely found out of its original locality. It has been reported to occur in Bohemia, at Zinnwald, in the Erzgebirge, with blende and galena. In Australia it is reported to occur in extremely limited quantity in the tin districts of New South Wales and Northern Queensland. The finding of this mineral in association with silver-lead is quite unexpected, and very interesting from a scientific point of view, more especially as it is in itself of a high argentiferous value, which is quite a new feature with this chemical compound. I am informed by Mr. J. G. S. Stitt, of Zeehan, that its average silver value is about 90oz. per ton, and that it is readily purchased—mixed with other minerals—by the local ore-buyers. Numerous analyses of stannite from Zinnwald and Cornwall give a metallic tin value of from 25.81 to 31.62 per cent., the copper varying from 23.55 to 30.0, but I am not prepared with information as to the metallurgical value of either metallic constituent as occurring in chemical association. I have submitted samples to Professor G. H. F. Ulrich, of the Dunedin University, who writes, under date March 30, 1895:—"The sample of ore is stannite, or bell metal ore, as you supposed. Our lecturer in metallurgy and assaying, Mr. Fitzgerald, made a rough quantitative analysis of the ore, the results of which fall also within the range of the analysis given for stannite in Dana's 'System of Mineralogy.' Its colour, streak, hardness, and indistinct cortical cleavage are also in agreement with those given for the mineral. If the ore occurs in any quantity the respective mine owners would, I think, be wise in getting it picked out for separate sale, with the object of having its contents in copper and tin taken into account in the sale price in addition to



the per cent. of silver.' The sample sent with this note is one of many collected by Mr. Stitt and myself from the ore heap at the locality mentioned. Will you please add this to the Museum collection.

"NOTES ON FURTHER PROOFS OF GLACIATION AT LOW LEVELS," BY MR. T. B. MOORE, F.R.G.S.—After referring to an extract from a letter to himself from Professor R. V. Lendenfeld, of the University Czernowitz, relative to and agreeing with a previous paper on the first proofs of land glaciations in Tasmania, the writer said that upon examination of the banks of the King River, West Coast of Tasmania, he had discovered large ice worn boulders, striated and grooved, in the deep gorge of the river situated at the upper landing, and also similar glaciated boulders in Harvey's Creek, at a distance of a quarter of a mile from its junction with the King River at the landing. The boulders were large, many tons in weight, and composed principally of silurian sandstone, and the distinctness of the planed surfaces, grooves, and striæ was a conclusive proof that the period of the transposition by the ice was of very recent (comparatively) date. These blocks were at an altitude of not more than 100ft. above the sea level. In the same locality, on the southern bank of the river, 150ft. above its bed, was a large moraine, composed of rocks brought from the inland mountains, probably at the beginning of our glacial period. During the recent substantial improvements to the Strahan-Lyell-road, a very interesting phenomenon of the glacial action had been exposed through the accumulation of rubbish and moss being removed from the cuttings and drains of the road. A full description of this phenomenon was given, and as it was accessible on the way to the greatest mine in the Island, which many scientists and geologists were sure to visit, it was to be hoped that more able men than the writer would give their views as to its age, origin, and nature. Illustrative specimens from this last discovery were exhibited.

"Notes on some new fossil plants to Tasmania," by Mr. R. M. Johnston, F.L.S., and "The Botany of the Hartz and Adamson Ranges," by Mr. L. Rodway.